

AMENDED CLAIMS

[received by the International Bureau on 12 August 2005 (12.08.2005);
original claims 1-21 replaced by new claims 22-31]

5

22. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture,

10

wherein the carbon flexible heating structure is a reinforcing material of a conductive composition filled with short staples.

15

23. The carbon flexible heating structure of claim 22, wherein the diameter of the short staple is 1 through 50 μm and the short staple is one of a glass fiber, a carbon fiber, and a graphite fiber.

20

24. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein the carbon flexible heating structure has the shape of a mesh, and

25

wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

30

25. The carbon flexible heating structure of claim 24, wherein the port portions are tin-plated copper wires or silver wires.

35

26. A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid silicon rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture, wherein insulation coating formed of an insulating mixture

obtained by mixing liquid silicon rubber and a diluent and
agitating a mixture is provided on a surface of the carbon flexible
heating structure.

27. A carbon flexible heating structure formed by molding a
conductive composition obtained by mixing liquid silicon rubber
and graphite powder at a weight rate in a range of 100:10~150
into a particular shape and curing a mixture,
wherein the carbon flexible heating structure is a reinforcing
material of a conductive composition filled with short staples.

28. The carbon flexible heating structure of claim 27, wherein
the diameter of the short staple is 1 through 50 μm and the short
staple is one of a glass fiber, a carbon fiber, and a graphite
fiber.

29. A carbon flexible heating structure formed by molding a
conductive composition obtained by mixing liquid silicon rubber
and graphite powder at a weight rate in a range of 100:10~150
into a particular shape and curing a mixture,
wherein the carbon flexible heating structure has the shape of
a mesh, and

wherein the mesh is a fabric made of a woof and a warp and has
port portions formed longer than the woof or the warp of the
fabric, and the port portions are formed of a conductive metal
wire having superior conductivity.

30. The carbon flexible heating structure of claim 29, wherein
the port portions are tin-plated copper wires or silver wires.

31. A carbon flexible heating structure formed by molding a
conductive composition obtained by mixing liquid silicon rubber
and graphite powder at a weight rate in a range of 100:10~150
into a particular shape and curing a mixture,

5 wherein insulation coating formed of an insulating mixture obtained by mixing liquid silicon rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.